

Aluminium@ foil for electrolytic capacitors - is vacuum-coated on both sides with aluminium@/alumina insulating film

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Abstract of DE4127743

Al foil for electrolytic capacitors has an increased surface capacitance. Pore-free layers contg. Al and Al oxide are deposited on both sides of a flat Al foil. The Al is present as columnar crystals, which are surrounded by the Al₂O₃ and electrically insulated from each other. Mfg. the capacitors comprises vacuum-coating on both sides with an Al film at an oxygen partial pressure of 0.0001 - 0.002 mbar and a coating rate of 200-5000 nm/sec. Angle of impact of the Al particles at the start of the coating process is greater than 30 deg.

The Al/alumina film contains valve metals e.g. Ti, Ta, or Zr or their cpds. and/or stabilising elements such as P, Cr or their cpds. These components are added to the Al to be evaporated, co-evaporated from independent sources, or incorporated after vacuum-coating by treatment with an aq. stabilising soln.

USE/ADVANTAGE - Al foil obtd. is for electrolytic capacitors, has increased surface capacitance and stability. No need to use corrosive or toxic etch solns. or electrolysis baths. Conventional Al vacuum-coating equipment is used

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